QUIETFlow SQS

ELTA FANS

Single **In-Line Fans**

Quietflow SQS - Single In-Line
Features & Benefits

The Quietflow SQS is a range of acoustically treated single in-line fans for internal mounting, manufactured in galvanised steel with a natural finish. These compact units are designed to overcome space restrictions in buildings with low ceiling voids, whilst also providing exceptional sound characteristics when fans are close to building occupants.

- **Air volume flow rates of up to 1.38 m^3/sec.**
- **Static pressures of up to 400 Pa.**
- **7 sizes – 125mm up to 500mm.**
- **Robust galvanised sheet steel casing.**
- **Highly efficient forward curved centrifugal fan.**
- **Single speed motor.**
- **External rotor or induction motor.**
- **Suitable for operating temperatures of up to 40° C.**
- **In built vibration isolation.**
- **Lower noise levels.**

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Features & Benefits

Material Strength - A robust, lightweight unit with a galvanised sheet steel casing which is lined with flame retardant acoustic lining for much improved sound characteristics.

Reliability – Motors have sealed for life bearings.

Low noise - Single fans are acoustically lined so breakout noise levels are significantly lowered.

Low profile - Casings have a low profile design which allows ease of fitting in roof spaces.

Quality impellers – The forward curved centrifugal impellers are directly driven by an external rotor or induction motor, mounted on anti-vibration mounts fitted between the motor mounting and the fan casing, designed to provide reliable, continuous air extraction with a smooth airflow.

Easy access - There is easy access to the fan via the lid which means easy access for cleaning and maintenance.

Ease of installation – All models are designed for direct connection to standard diameter flexible or rigid circular ducting with 50 mm long spigots for ease of connection.

Motor protection –All SQS units have integral thermal overload protection which prevents the motor from overheating.

Mounting - Mounting brackets are supplied fixed to the sides of the casing for ease of installation.

Space saving - The impeller axis runs horizontally across the unit which minimises the overall height of the unit and enables it to be fitted into roof voids.

Tested to the very latest standards – SQS units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) at Elta Fans own test facility, meaning accurate, up to date information on performance and noise data that can be relied upon.

Quality assurance – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

Warranty – Each SQS has a 12 month warranty.

Full accessory range - Speed controllers, fast clamps, anti-vibration mounts, electric heater batteries, silencers, panel filters, flexible connectors and non return dampers.

Applications

Toilets, bathrooms, hotels, schools, colleges and libraries.

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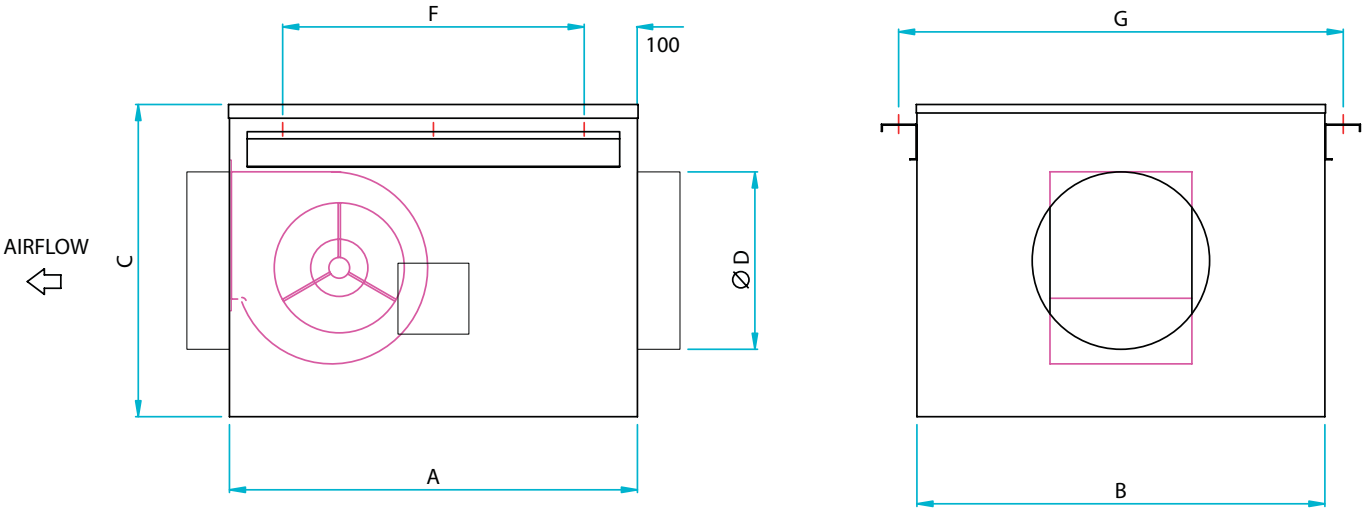
Quietflow SQS - Single In-Line
Dimensional Data



Product Code	A	B	C	D	F	G	Weight kg
SQS125-L	400	375	210	125	200	425	12
SQS150-L	425	500	260	150	225	550	16
SQS200-L	425	500	260	200	225	550	17
SQS250-L	475	550	300	250	275	600	19
SQS315-11L	575	700	440	315	375	750	34
SQS315-L	575	700	440	315	375	750	34
SQS315-33L	650	700	440	315	375	750	34
SQS400-L	700	800	460	400	500	850	46
SQS500-L	850	900	570	500	650	950	58

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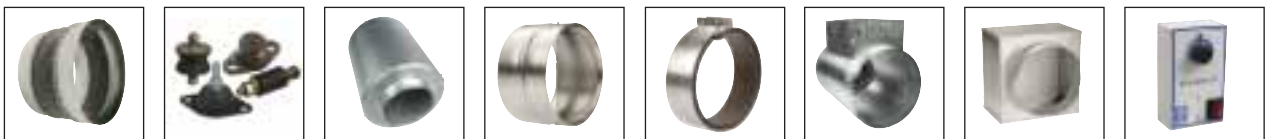
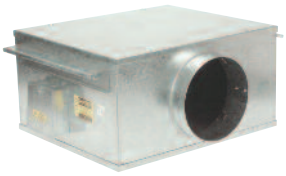
Accessories



p95	p95	p95	p96	p96	p96	p97	p177

Quietflow SQS - Single In-Line
Performance & Electrical Data



SINGLE Phase - 220V-240V / 50Hz

Product Code	Speed r/min	Airflow m³/s @ Static Pressure Pa.											Motor Electrical Data*			Speed Control		Sound Level dBA @ 3m	Breakout Sound Level dBA @ 3m
		0	25	50	75	100	150	200	250	300	350	400	FLC Amps	SC Amps	Input Watts	Electr-onic	Trans-former		
SQS125-L	1700	0.074	0.071	0.068	0.066	0.064	0.058	0.051	0.040	0.020			0.47	1.41	0.100	EL31	TC12	31	27
SQS150-L	1750	0.160	0.155	0.150	0.145	0.140	0.130	0.118	0.100	0.082			0.82	2.60	0.165	EL31	TC12	33	29
SQS200-L	1500	0.175	0.172	0.170	0.166	0.163	0.155	0.142	0.130	0.110	0.070		0.82	2.60	0.185	EL31	TC12	37	32
SQS250-L	1520	0.230	0.225	0.216	0.210	0.202	0.186	0.170	0.150	0.130	0.102		0.95	2.90	0.220	EL31	TC12	41	35
SQS315-11L	1220	0.46	0.425	0.38	0.342	0.305	0.221	0.136	0.046				1.20	4.80	0.250	EL31	TC12	44	36
SQS315-L	1350	0.570	0.537	0.500	0.470	0.436	0.368	0.300	0.196	0.050			3.10	9.00	0.650	EL61	TC14	48	42
SQS315-33L	1300	0.68	0.67	0.65	0.63	0.62	0.59	0.54	0.49	0.41	0.28	0.09	3.70	11.00	0.840	EL61	TC18	48	41
SQS400-L	1220	1.06	1.04	1.02	1.00	0.98	0.93	0.88	0.82	0.74	0.45	0.17	6.50	14.50	1.400	EL101	TC18	52	44
SQS500-L	750	1.38	1.37	1.35	1.33	1.31	1.26	1.20	1.10	0.94			8.50	17.75	1.500	EL101	TC18	53	45

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

* Maximum electrical data applicable to free air delivery. All data at 230V.
Motors wound for 220-240V/1Ph/60Hz supply are available upon request - Contact Elta Fans for these requirements.

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Silencer Data

Product Code	dBA Attenuation			
	300L	600L	900L	1200L
SQS125-L	-7	-12	-17	-20
SQS150-L	-8	-12	-15	-19
SQS200-L	-7	-11	-15	-18
SQS250-L	-8	-11	-13	-16
SQS315-11L	-4	-6	-9	-10
SQS315-L	-7	-9	-11	-13
SQS315-33L	-6	-9	-10	-13
SQS400-L	-6	-8	-10	-13
SQS500-L*	-	-	-	-

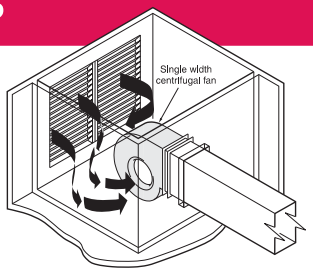
* For SQS500-L silencer data contact Elta Fans.

Anti-Vibration Mounts

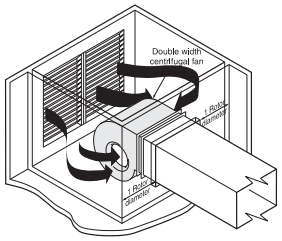
Product Code	A.V. Mounts
SQS125-L	SEL01
SQS150-L	SEL01
SQS200-L	SEL02
SQS250-L	SEL03
SQS315-11L	SEL03
SQS315-L	SEL03
SQS315-33L	SEL03
SQS400-L	SEL03
SQS500-L*	SEL04

Inlet Plenums

DO NOT!
With a single width fan the airflow takes a single turn to enter it; eccentric flow is created.



DO!
Selection of a double inlet fan improves airflow. Central positioning of the fan and plenum entry grille will also assist.



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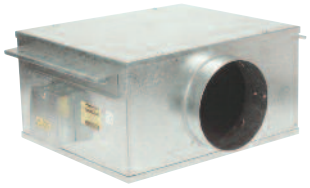
Quietflow SQS - Single In-Line Sound Data



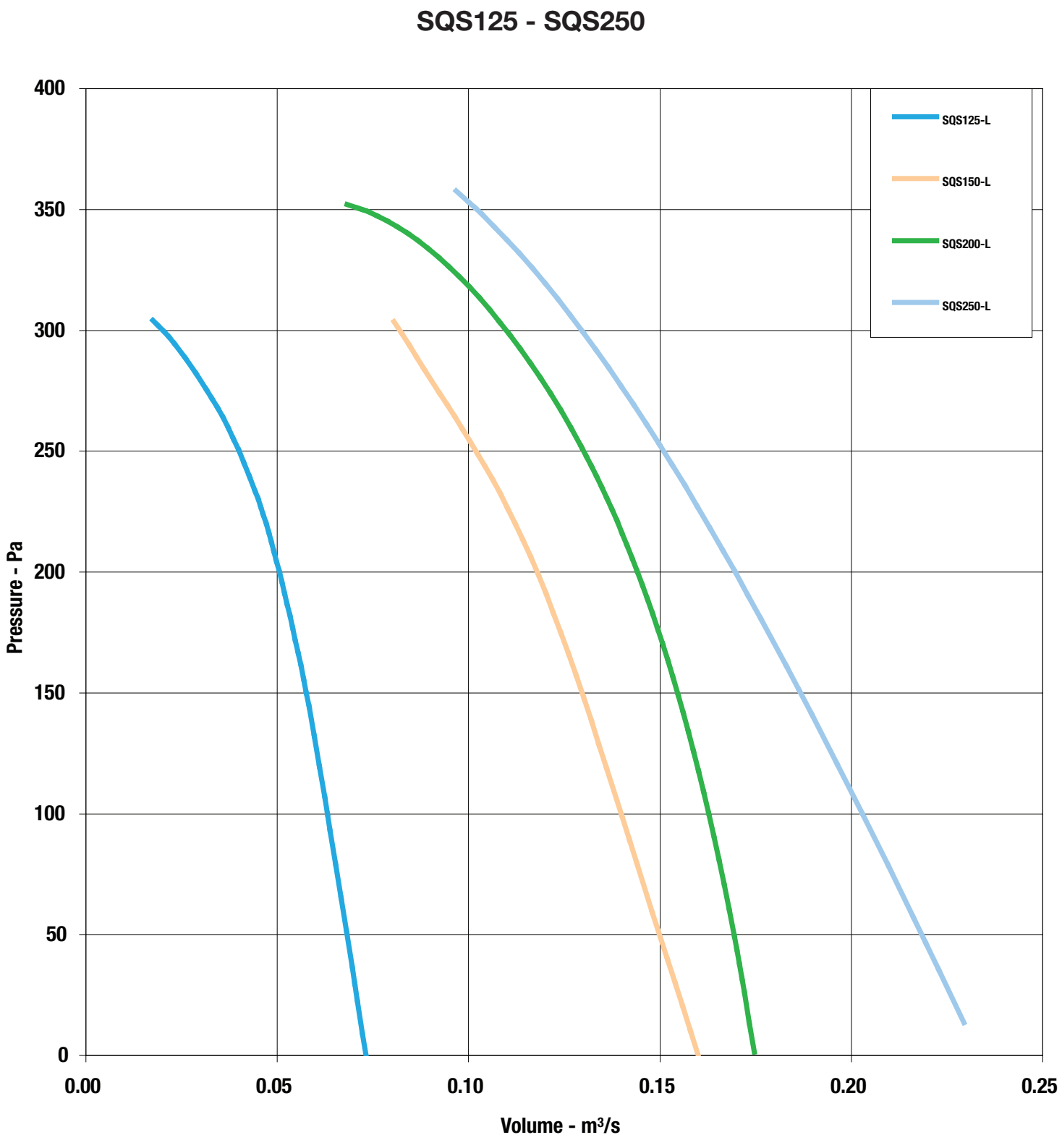
SQS - SINGLE Phase

Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SQS125-L	57	61	55	48	44	38	36	31	31
SQS150-L	62	61	56	51	47	42	36	32	33
SQS200-L	66	64	61	55	49	47	43	39	37
SQS250-L	70	68	65	59	54	50	47	41	41
SQS315-11L	78	73	67	58	58	54	55	46	44
SQS315-L	82	77	71	62	62	58	59	50	48
SQS315-33L	83	78	72	63	62	58	60	51	48
SQS400-L	85	80	75	66	65	66	61	52	52
SQS500-L	81	80	74	67	68	67	61	53	53

Acoustic data: tests and preparation of data have been carried out in accordance with BS848 Part 2(1985). The In-duct Sound Power Level Spectra are in dB re 1pW. The overall A-Scale sound pressure level is at a distance of three metres with spherical propagation. It is expressed in dB re 20uPa and is presented for comparative purposes only as in practice the semi-reverberant nature of any installation and directivity effects can give a different level.

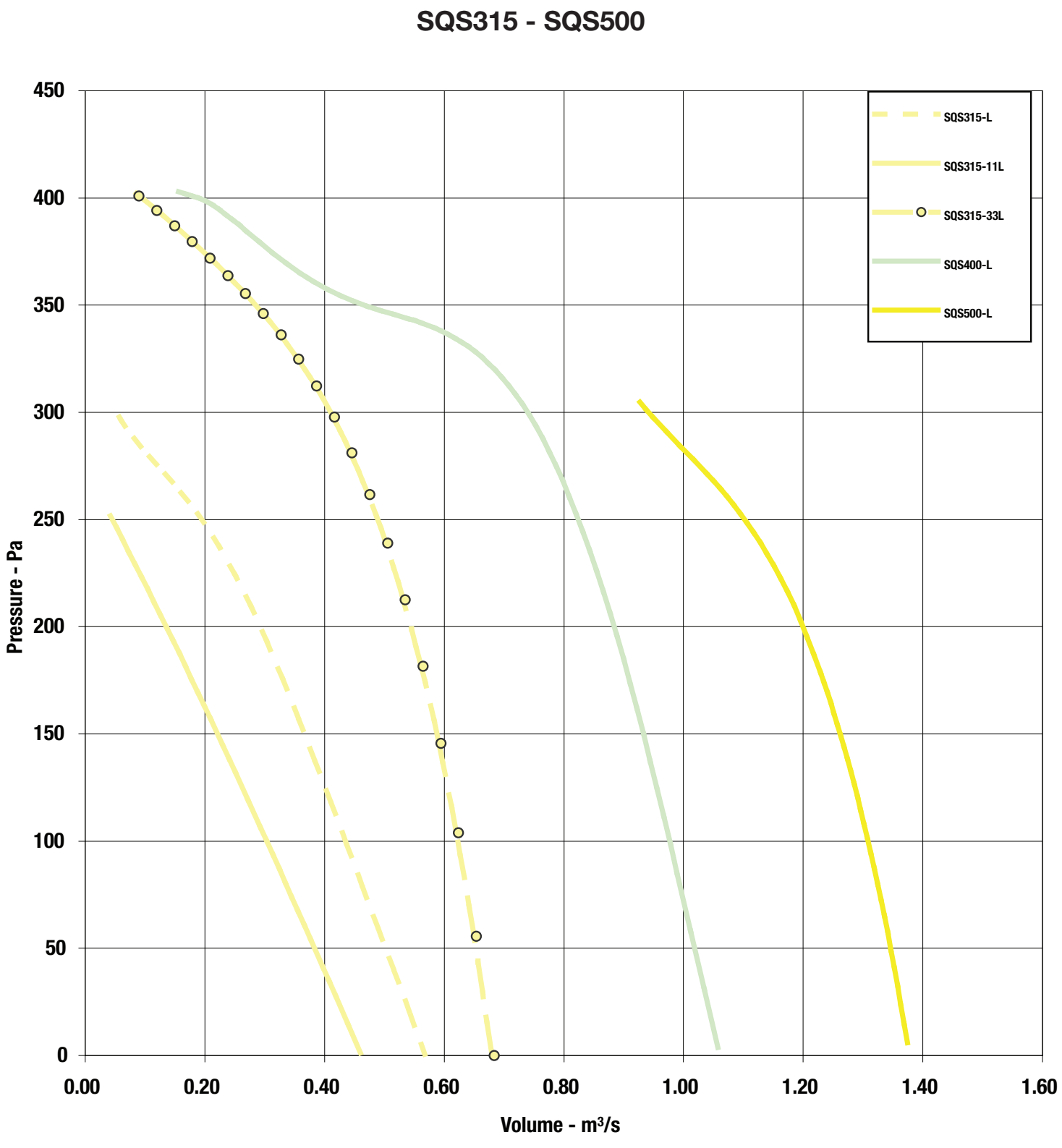
Quietflow SQS - Single In-Line

Performance Curves



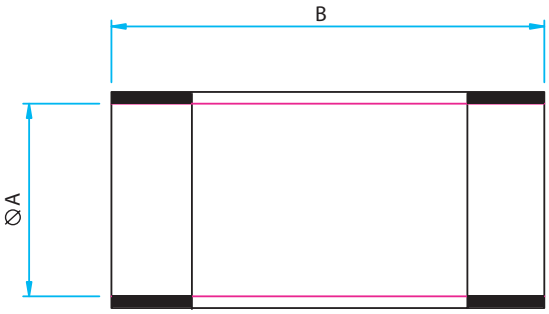
Quietflow SQS - Single In-Line

Performance Curves



Quietflow SQS - Single In-Line Accessories

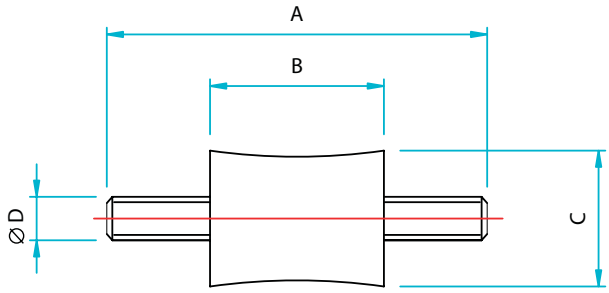
Flexible Connectors



- Fix directly onto spigot
- Provides flexible connection between fan and accessory or duct
- PVC coated polyester with galvanisd sheet steel

Product Code	Fan Dia. A	B	Weight kg
018-0125-FLEX	125	150	0.2
018-0150-FLEX	150	150	0.2
018-0200-FLEX	200	150	0.3
018-0250-FLEX	250	1500	0.4
018-0315-FLEX	315	150	0.5
018-0400-FLEX	400	1500	0.7
018-0500-FLEX	500	150	1.0

Anti-Vibration Mounts



- Fit directly to fan
- Rubber with steel insert
- Supplied as set of 4, complete with fixings

Product Code	A	B	C	D	Weight kg (Per Set)
062-SEL01	45	19	13	M5	0.044
062-SEL02	40	15	15	M5	0.052
062-SEL03	70	32	25	M8	0.210
062-SEL04	60	20	25	M8	0.186
062-SEL05	60	20	25	M8	0.187

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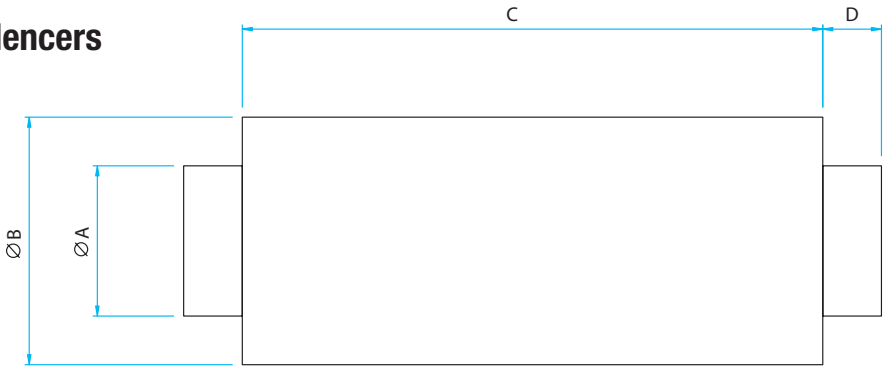
Silencers



- For information on silencers and an explanation of the data, see p74
- Pre-galvanised sheet steel with perforated steel lining
- Infill of glass tissue faced high density mineral wool
- For saturated or other special applications please refer to Elta Fans

Product Code	Fan Dia.	A	B	C 1	C 2	C 3	C 4	D	Weight kg			
									1	2	3	4
068-0125-JF*	125	123	230	300	600	900	1200	40	2.9	5.4	7.8	10.2
068-0150-JF*	150	148	255						3.4	6.1	8.9	11.6
068-0200-JF*	200	198	305						4.2	7.6	11.0	14.5
068-0250-JF*	250	248	355						5.0	9.1	13.2	17.3
068-0315-JF*	315	313	420						6.1	11.1	16.1	21.0
068-0400-JF*	400	398	505						7.5	13.6	19.8	25.9

* Add 1, 2, 3 or 4 depending on length required.
For SQS500-L silencer selection contact Elta Fans.

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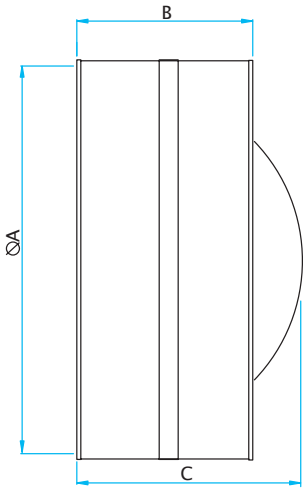
Quietflow SQS - Single In-Line Accessories

Non Return Dampers

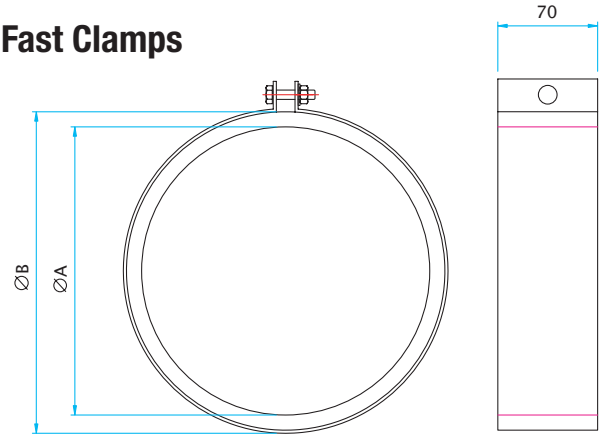
- Prevents reverse flow of air when fan not operating
- Galvanised sheet steel case
- Spring operated, aluminium sheet blades



Product Code	Fan Dia. A	B	C	Weight kg
018-125-DAMPER	125	90	100	0.3
018-150-DAMPER	150	90	110	0.3
018-200-DAMPER	200	125	150	0.6
018-250-DAMPER	250	125	190	0.6
018-315-DAMPER	315	125	210	1.3

N.B. For 400 and 500 diameter selection contact Elta Fans

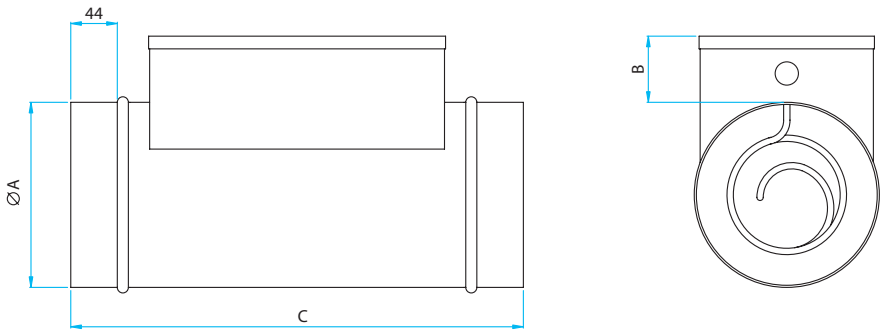
Fast Clamps



Product Code	Fan Size	A	B	Weight kg
018-125-CLAMP	125	117	141	0.29
018-150-CLAMP	150	142	166	0.33
018-200-CLAMP	200	192	216	0.42
018-250-CLAMP	250	242	266	0.49
018-315-CLAMP	315	307	331	0.59
018-400-CLAMP	400	392	416	0.74
018-500-CLAMP	500	492	516	0.87

- For quick connection of spigotted fans to circular duct or accessories
- Galvanised steel circular duct clamp with foam lining

Electric Heater Batteries



- Safe and clean heating
- Max exit temperature is 40°C at 70% RH
- Galvanised sheet steel case
- Elements are nickel chromium wire insulated by compacted magnesium oxide powder within a stainless steel or incoloy tube and sealed by ceramic bead and silicon sealant
- Air velocity min 2m/s, max 6m/s
- Fitted with manual reset high temperature control

Product Code	KW	Stage	Phase	Air Flow @ m^3/s		A	B	C	Weight kg
				Min	Max				
018-0125-HEAT-1	1.0	1	1	0.025	0.074	125	80	400	2
018-0150-HEAT-1	1.5	1	1	0.035	0.106	150	80	400	3
018-0200-HEAT-1	2.0	1	1	0.063	0.189	200	80	400	4
018-0250-HEAT-1	3.0	1	1	0.098	0.295	250	80	400	4
018-0315-HEA-1/3	4.5	3/1	1/3	0.156	0.468	315	80	400	5
018-0400-HEA-1/3	9.0	3/1	1/3	0.251	0.784	400	80	400	7
018-0500-HEAT-3	18.0	2	3	0.49	1.178	500	80	500	13
018-0500-HEAT-4	27.0	3	3	0.49	1.178	500	80	500	14

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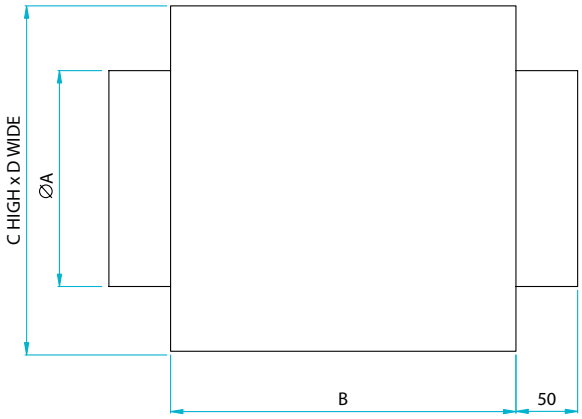
Quietflow SQS - Single In-Line Accessories

Panel Filters



- Galvanised steel casing
- Filter media to BS EN 779 rating G3 with 85% arrestance
- Filter access with removable panel

Product Code	Fan Dia. A	B	C	D	Weight kg
018-0125-FILT-P	125	155	200	200	2
018-0150-FILT-P	150	155	250	250	2
018-0200-FILT-P	200	155	250	250	2
018-0250-FILT-P	250	200	300	300	3
018-0315-FILT-P	315	300	440	440	8
018-0400-FILT-P	400	400	440	440	8
018-0500-FILT-P	500	500	550	550	11

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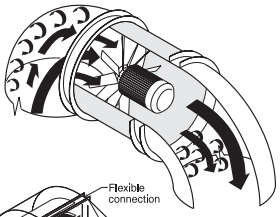
Turning vanes at sharp bends

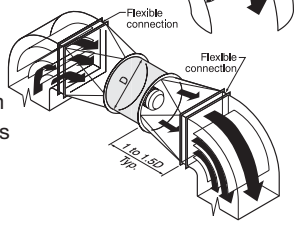
DO NOT!

Eccentric flow conditions at both inlet and outlet will result in part of the impeller being starved of air and the fan not operating satisfactorily.



DO!

Square-to-round transitions and turning vanes in elbows assists uniform airflow; this is a compromise only and is by no means ideal.



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